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10/765,899	01/29/2004	Masanori Amano	032111	2604

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EXAMINER

SIMONE, CATHERINE A

ART UNIT PAPER NUMBER

1772

DATE MAILED: 10/05/2006

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**BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES**

Application Number: 10/765,899  
Filing Date: January 29, 2004  
Appellant(s): AMANO ET AL.

**MAILED**

OCT 05 2006

**GROUP 1700**

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Ryan B. Chirnomas  
For Appellant

**EXAMINER'S ANSWER**

This is in response to the appeal brief filed August 3, 2006 appealing from the Office action mailed February 14, 2006.

**(1) Real Party in Interest**

A statement identifying by name the real party in interest is contained in the brief.

**(2) Related Appeals and Interferences**

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

**(3) Status of Claims**

The statement of the status of claims contained in the brief is correct.

**(4) Status of Amendments After Final**

The appellant's statement of the status of amendments after final rejection contained in the brief is incorrect.

The amendment after final rejection filed on May 15, 2006 has been entered.

**(5) Summary of Claimed Subject Matter**

The summary of claimed subject matter contained in the brief is correct.

**(6) Grounds of Rejection to be Reviewed on Appeal**

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

**(7) Claims Appendix**

The copy of the appealed claims contained in the Appendix to the brief is correct.

**(8) Evidence Relied Upon**

US 2002/0126247 A1	Hasegawa et al	9-2002
JP 2002-293049	Amano et al	10-2002

**(9) Grounds of Rejection**

The following ground(s) of rejection are applicable to the appealed claims:

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-4 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Hasegawa et al. (US 2002/0126247 A1) in view of Amano et al. (JP 2002-293049; refer to the translation copy).

Hasegawa et al. discloses a layer forming relief for transferring and printing an application fluid applied on printing convex portions on a printing object, the layer forming relief comprising the printing convex portions formed as linear strips (*Fig. 7b, element 111*), adjoining printing convex portions aligned to be parallel with each other with a prescribed space (*Fig. 7b, element 112*), and a plurality of micro-projections and projected micro-strips (*Fig. 7b, elements 119*) distributed on the top faces of each of the printing convex portions so as to form a groove between adjoining micro-projections and micro-strips for retaining the application fluid (*see paragraph 0010, lines 4-7*) wherein the application fluid is an organic luminous substance (*see paragraph 0004, line 4*).

However, Hasegawa et al. fails to teach the micro-projections being formed into a truncated cone or in a cylinder and the cross section of the projected micro-strips in a direction perpendicular to a longitudinal direction being trapezoidal or rectangular. Additionally, Hasegawa et al. fails to teach the height of the micro-projections and projected micro-strips

being in the range of 2 to 55  $\mu\text{m}$ , the space between adjoining micro-projections and projected micro-stripes being 7  $\mu\text{m}$  or more, the diameter of the top face of the micro-projections being 5  $\mu\text{m}$  or more, the width of the top face of the projected micro-stripes being 3.5  $\mu\text{m}$  or more, and the number of micro-projections and projected micro-stripes being in the range of 2 to 33.

Amano et al. teaches that it is well known in the art to have a layer forming relief including micro-projections formed of a truncated cone or cylinder shape (*see paragraph 0010, lines 1-2*) and projected micro-stripes where the cross section of the projected micro-stripes is rectangular or trapezoidal in the direction perpendicular to the longitudinal direction (*see paragraph 0010, lines 1-2 and drawing 3, element 3*) and further the height of the micro-projections and projected micro-stripes being in the range of 2 to 55  $\mu\text{m}$  (*see paragraph 0019, lines 9-10*), the space between adjoining micro-projections and projected micro-stripes being 7  $\mu\text{m}$  or more (*see paragraph 0019, lines 7-9*), the diameter of the top face of the micro-projections being 5  $\mu\text{m}$  or more (*see paragraph 0020*), the width of the top face of the projected micro-stripes being 3.5  $\mu\text{m}$  or more (*see paragraph 0020*) and the number of micro-projections and projected micro-stripes being in the range of 2 to 33 (*see paragraph 0017*) for the purpose of preventing the occurrence of a marginal phenomenon and ensuring formation of an orientation film having an even thickness when printing and transferring a coating liquid onto an object.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the applicant's invention was made to have modified the micro-projections and projected micro-stripes in Hasegawa et al. to have the micro-projections formed into a truncated cone or a cylinder shape and the cross section of the projected micro-stripes in the direction perpendicular to the longitudinal direction be trapezoidal or rectangular, and the height of the micro-projections

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and projected micro-stripes be in the range of 2 to 55  $\mu\text{m}$ , the space between adjoining micro-projections and projected micro-stripes be 7  $\mu\text{m}$  or more, the diameter of the top face of the micro-projections be 5  $\mu\text{m}$  or more, the width of the top face of the projected micro-stripes be 3.5  $\mu\text{m}$  or more and the number of micro-projections and projected micro-stripes be in the range of 2 to 33 as suggested by Amano et al. in order prevent the occurrence of a marginal phenomenon and ensure formation of an orientation film having an even thickness when printing and transferring a coating liquid onto an object.

**(10) Response to Argument**Rejection of claims 1-4 under 35 U.S.C. 103(a) over Hasegawa in view of Amano

Appellants argue “the projections 3 of Amano are not analogous to the mesh 119 of Hasegawa, but are analogous to the projections 111 of Hasegawa, because they are formed on a top face of a single printing relief portion 2”. Appellants further argue that “one having ordinary skill in the art would not have been motivated to combine the teachings of Amano and Hasegawa, since projections 111 of Hasegawa are formed in stripes, while the projections 3 of Amano are formed as truncated cones or cylinders”.

However, it is to be pointed out that both Hasegawa and Amano teach a layer forming relief for transferring and printing an application fluid onto an object. Hasegawa clearly teaches the structure of the layer forming relief as recited in independent claim 1. Hasegawa clearly teaches a layer forming relief having printing convex portions formed as linear strips (*Fig. 7b, element 111*), adjoining printing convex portions aligned to be parallel with each other with a prescribed space (*Fig. 7b, element 112*), and a plurality of micro-projections (*Fig. 7b, elements 119*) distributed on the top faces of each of the printing convex portions so as to form a groove

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between adjoining micro-projections for retaining the application fluid (*see paragraph 0010, lines 4-7*), but fails to teach the micro-projections 119 being formed into a truncated cone or in a cylinder. Amano clearly teaches a layer forming relief having micro-projections (*Figs. 2 and 3, element 3*) that are formed as truncated cones or cylinders (*see paragraph 0010, lines 1-2*). The micro-projections 119 in Hasegawa and the micro-projections 3 in Amano are analogous, since both are taught to retain fluid in the grooves between the adjoining micro-projections. Hasegawa clearly teaches micro-projections 119 retaining fluid in the grooves between adjoining micro-projections (*see paragraph 0010, lines 4-7*) and Amano clearly teaches micro-projections 3 retaining fluid in the grooves between adjoining micro-projections (*see paragraph 0007, lines 6-9*). Therefore, the micro-projections 119 of Hasegawa and the micro-projections 3 of Amano are analogous, since they both are retaining fluid.

Furthermore, it is to be pointed out that Amano was merely cited to teach a layer forming relief having micro-projections 3 formed as truncated cones or cylinders for the purpose of preventing occurrence of a marginal phenomenon and ensuring formation of an orientation film having an even thickness when printing and transferring a coating liquid onto an object (*see abstract*). Therefore, since the micro-projections 119 of Hasegawa and the micro-projections 3 of Amano are analogous, as previously shown, it would have been obvious to one of ordinary skill in the art at the time the applicant's invention was made to have modified the micro-projections 119 of Hasegawa to be formed as truncated cones or cylinders as suggested by Amano in order to prevent occurrence of a marginal phenomenon and ensure formation of an orientation film having an even thickness when printing and transferring a coating liquid onto an object.

Appellants further argue “the combination of references does not disclose or suggest micro-stripes ‘distributed on the top faces of each of the printing convex portions’ and which have a cross-section which is ‘trapezoidal or rectangular,’ as required by claims 3 and 4”.

However, it is to be pointed out again that Hasegawa and Amano both teach a layer forming relief for transferring and printing an application fluid onto an object. Hasegawa clearly teaches a layer forming relief having printing convex portions formed as linear strips (*Fig. 7b, element 111*), adjoining printing convex portions aligned to be parallel with each other with a prescribed space (*Fig. 7b, element 112*), and a plurality of projected micro-stripes (*Fig. 7b, elements 119*) distributed on the top faces of each of the printing convex portions so as to form a groove between adjoining micro-stripes for retaining the application fluid (*see paragraph 0010, lines 4-7*), but fails to teach the micro-stripes 119 having a cross-section which is trapezoidal or rectangular. Amano teaches a layer forming relief having micro-projections (*Figs. 2 and 3, element 3*) which have a trapezoidal or rectangular cross-section (*see paragraph 0010, lines 1-2 and see Fig. 3, elements 3*). The micro-stripes 119 in Hasegawa and the micro-projections 3 in Amano are analogous, since both are taught to retain fluid in the grooves there between. Hasegawa clearly teaches micro-stripes 119 retaining fluid in the grooves between adjoining micro-stripes (*see paragraph 0010, lines 4-7*) and Amano clearly teaches micro-projections 3 retaining fluid in the grooves between adjoining micro-projections (*see paragraph 0007, lines 6-9*). Therefore, the micro-stripes 119 of Hasegawa and the micro-projections 3 of Amano are analogous, since they both are retaining fluid.

Furthermore, it is to be pointed out that Amano was merely cited to teach a layer forming relief having micro-projections 3 having a trapezoidal or rectangular cross-section for the

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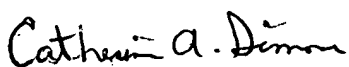
purpose of preventing occurrence of a marginal phenomenon and ensure formation of an orientation film having an even thickness when printing and transferring a coating liquid onto an object (*see abstract*). Therefore, since the micro-stripes 119 of Hasegawa and the micro-projections 3 of Amano are analogous, as previously shown, it would have been obvious to one of ordinary skill in the art at the time the applicant's invention was made to have modified the micro-stripes 119 of Hasegawa to have a trapezoidal or rectangular cross-section as suggested by Amano in order to prevent occurrence of a marginal phenomenon and ensure formation of an orientation film having an even thickness when printing and transferring a coating liquid onto an object.

**(11) Related Proceeding(s) Appendix**

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,



  
Catherine A. Simone

September 28, 2006

Conferees:

Jennifer Kolb-Michener

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SUPERVISORY PATENT EXAMINER 9/29/06  
  
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